

CLAIMS

1. A valve comprising a body (2, 102) in which there are a first duct (7, 107) and a second duct (8, 108) for the flow of a fluid to be shut off, a closure member (4, 104) active in the valve body and having a central core (5, 105) with an end associated with actuator means (3, 33, 40; 133, 140, 151, 162) which move it axially in order to close and open the first duct (7, 107), a flexible circular disc (9, 109) around the core and fixed peripherally to the valve body, characterized in that:

the portion of the core of the closure member which extends from the disc remote to the end associated with the actuator means, is configured substantially with a head (6, 106) having a diverging profile which closes and opens the first duct (7, 107) as a result of the operation of the actuator means,
and in that:

the second duct (8, 108) or at least the initial portion thereof, extends transversely relative to the core of the closure member, in the region of said head thereby.

2. A valve according to Claim 1, wherein the disc (9, 109) of the closure member (4, 104) is connected to the internal wall of the second duct (8, 108) without steps or discontinuities which might obstruct the flow of a fluid along the disc, when the closure member closes the first duct (7, 107).

3. A valve according to Claim 2, wherein the second duct (8, 108) is curved so as to favour the flow of the fluid from the valve when it is mounted with the valve body (2) disposed above the actuator means (3, 33, 40; 133, 140, 151, 162).

4. A valve according to any one of the preceding claims, wherein the head (6, 106) of the closure member (4, 104) has a configuration diverging towards the tip at an angle (β) of between 20° and 45°.
5. A valve according to Claim 4, wherein the area of the disc (9, 109) in plan is 10-20% greater than the cross-section of the first duct (7, 107) closed by the closure member (4, 104).
6. A valve according to any one of the preceding claims, wherein the closure member is made of PTFE, EPDM, Teflon®, or other similar polymer material.
7. A valve according to any one of the preceding claims, wherein the actuator means of the closure member (4, 104) comprise an actuator body (3, 133) connected to the valve body (2), squeezing the edge of the disc (9, 109) against an abutment surface (10) formed in the valve body, and wherein there is a sealing ring (1, 111) between the edge of the circular ring and the actuator body.
8. A valve according to Claim 7, wherein the rear end of the core (105) of the closure member (104) is connected to a collar (151) movable axially in the actuator body (133) in opposition to the resilient force of resilient means (157) compressed between the collar and a threaded sleeve (153), also movable axially inside the actuator body and operated by a hand wheel (162).
9. A valve according to Claim 8, wherein the resilient means (157) comprise Belleville washers.
10. A valve according to Claim 8, wherein a shoulder (152) is provided inside the actuator body (133) for limiting the travel of the sleeve (153) in an advanced position, so that when the closure member (140) is in

the closed condition, it is subject solely to the force of the resilient means (157).